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L2: Entry 1 of 1

File: USPT

Jan 2, 2001

US-PAT-NO: 6169071

DOCUMENT-IDENTIFIER: US 6169071 B1

TITLE: Compounds and methods for modulating cell adhesion

DATE-ISSUED: January 2, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Blaschuk; Orest W.	Westmount	N/A	N/A	CAX
Gour; Barbara J.	Montreal	N/A	N/A	CAX

US-CL-CURRENT: 514/4; 435/7.21, 435/7.23, 514/14, 514/15, 514/16, 514/17,  
514/18, 530/317, 530/326, 530/327, 530/328, 530/329, 530/330, 530/331

## CLAIMS:

What is claimed is:

1. A method for modulating cell adhesion, comprising contacting a classical cadherin-expressing cell with an effective amount of a compound, wherein the compound comprises the sequence His-Ala-Val within a cyclic peptide ring of 4-15 amino acid residues.
2. A method according to claim 1, wherein said cadherin is selected from the group consisting of E-cadherin and N-cadherin.
3. A method according to claim 1, wherein said cadherin is selected from the group consisting of P-cadherin and R-cadherin.
4. A method according to claim 1, wherein said cell is selected from the group consisting of epithelial cells, endothelial cells, neural cells, tumor cells and lymphocytes.
5. A method according to claim 1, wherein said cell adhesion modulating compound inhibits cell adhesion.
6. A method according to claim 1, wherein said cell adhesion modulating compound enhances cell adhesion.
7. A method according to claim 1, wherein said cell adhesion modulating agent compound is present with a pharmaceutical composition comprising a pharmaceutically acceptable carrier.
8. A method according to claim 7, wherein said pharmaceutical composition further comprises a modulator of cell adhesion, wherein said modulator comprises a cell adhesion recognition sequence bound by an adhesion molecule other than a classical cadherin.



**MEMORANDUM**

DATE: August 21, 2001

TO: Technology Center Directors

*Stephen G. Kunin*

FROM: Stephen G. Kunin  
Deputy Commissioner  
for Patent Examination Policy

**SUBJECT: Clarification that the clean replacement paragraph, section, or claim in an amendment under 37 CFR 1.121 is the official version of the paragraph, section, or claim**

The USPTO changed its practice as set forth in 37 CFR 1.121 for making amendments in patent applications. *See Changes to Implement the Patent Business Goals*, 65 Fed. Reg. 54603, 54637-40, 54672-73 (Sept. 8, 2000). This new amendment practice became mandatory for all amendments on March 1, 2001. *See Changes to Implement the Patent Business Goals*, 65 Fed. Reg. at 54637. Basically, the new amendment practice provides for amendment to the written description of the specification by way of a clean replacement paragraph or section and for amendment to the claims by way of clean replacement claims. *See* 37 CFR 1.121(b)(1)(i) and (ii), 1.121(b)(2)(i) and (ii), and 1.121(c)(1)(i) (2001). The new amendment practice also requires a marked up version of the replacement paragraph, section or claim showing the changes vis-a-vis the prior paragraph, section or claim (respectively). *See* 37 CFR 1.121(b)(1)(iii), 1.121(b)(2)(iii), and 1.121(c)(1)(ii) (2001).

There has been some controversy as to whether the marked up version of a replacement paragraph, section or claim may be considered as the official version of the amendment.

37 CFR 1.121 and the preamble of the final rule indicate that it is the clean replacement paragraph, section, or claim that is entered into the specification (*see* 37 CFR 1.121(b)(1)(i) and (ii), 1.121(b)(2)(i) and (ii), and 1.121(c)(1)(i)), and is used when printing the patent (*see Changes to Implement the Patent Business Goals*, 65 Fed. Reg. at 54637). The marked up version of the replacement paragraph, section or claim showing the changes is simply an aid to the examiner (*see Changes to Implement the Patent Business Goals*, 65 Fed. Reg. at 54639-40 (comment 62 and response)). That a marked up version is not required for any newly added paragraph or claim (*see* 37 CFR 1.121(b)(1)(iii) and 1.121(c)(1)(ii)), or for any unamended claim included in a clean set of all pending claims (*see* 37 CFR 1.121(c)(3)), should make it clear that the marked up version of the replacement paragraph, section or claim **cannot** be considered the official version of the replacement paragraph, section or claim.

The applicant is responsible for ensuring that the marked up version of the replacement paragraph, section or claim accurately shows all of the changes between the replacement paragraph, section or claim are the previous version of the paragraph, section or claim (respectively). However, this does not affect the fact it is the clean replacement paragraph, section, or claim (and **not** the marked up version of the replacement paragraph, section or claim) that is the official version of the replacement paragraph, section or claim.

The clean replacement paragraph, section, or claim is the official version of the paragraph, section, or claim for examination, patent printing, and all other purposes. Therefore, the marked up version of the replacement paragraph, section or claim is **not** the official version of the paragraph, section, or claim. It follows that it would be inappropriate to examine an application based solely on the marked up version of the replacement paragraph, section or claim, and any inconsistency between the clean replacement paragraph, section, or claim and the marked up version of the replacement paragraph, section or claim must be resolved in favor of the clean replacement paragraph, section, or claim.

Cc: Nicholas P. Godici  
Esther M. Kepplinger  
Edward R. Kazenske  
Mary Lee  
Kay Kim

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- To print/save clean copies of selected records from browser click **Print/Save Selected**.
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Long

1. ☐ 1/5/1 (Item 1 from file: 351)

009941800

WPI Acc No: 1994-209513/199426

**Prodn of stable granulocyte colony-stimulating factor solns****- by adding acetate, lactate, citrate, maleate, and/or phosphate buffer**

Patent Assignee: BOEHRINGER MANNHEIM GMBH (BOEF ); ROCHE DIAGNOSTICS GMBH (HOFF )

Inventor: MICHAELIS U; RUDOLPH R; WINTER G; WOOG H

Number of Countries: 034 Number of Patents: 012

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4242919	A1	19940623	DE 4242919	A	19921218	199426 B
WO 9414466	A1	19940707	WO 93EP3544	A	19931215	199428
AU 9458109	A	19940719	AU 9458109	A	19931215	199439
EP 674525	A1	19951004	WO 93EP3544	A	19931215	199544
			EP 94903779	A	19931215	
JP 8505610	W	19960618	WO 93EP3544	A	19931215	199648
			JP 94514767	A	19931215	
NZ 259333	A	19961029	NZ 259333	A	19931215	199648
			WO 93EP3544	A	19931215	
HU 74270	T	19961128	WO 93EP3544	A	19931215	199712
			HU 951767	A	19931215	
AU 692430	B	19980611	AU 9458109	A	19931215	199834
US 5919757	A	19990706	WO 93EP3544	A	19931215	199933
			US 95454184	A	19950615	
			US 97857172	A	19970515	
KR 266146	B1	20000915	WO 93EP3544	A	19931215	200134
			KR 95702589	A	19950619	
HU 219548	B	20010528	WO 93EP3544	A	19931215	200140
			HU 951767	A	19931215	
EP 674525	B1	20010725	WO 93EP3544	A	19931215	200143
			EP 94903779	A	19931215	

Priority Applications (No Type Date): DE 4242919 A 19921218

Cited Patents: 01Jnl.Ref; DE 3723781; EP 306824; EP 373679; EP 528314; JP 4077434

Patent Details:

Patent No. Kind Lan Pg Main IPC Filing Notes

DE 4242919 A1 12 A61K-037/02

WO 9414466 A1 G 36 A61K-037/02

Designated States (National): AU BG BR CA CZ FI HU JP KR NO NZ PL RO RU SK UA US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

AU 9458109 A A61K-037/02 Based on patent WO 9414466

EP 674525 A1 G A61K-037/02 Based on patent WO 9414466

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE

JP 8505610 W 35 A61K-038/00 Based on patent WO 9414466

NZ 259333 A A61K-038/19 Based on patent WO 9414466

HU 74270 T A61K-038/18 Based on patent WO 9414466

AU 692430 B A61K-037/02 Previous Publ. patent AU 9458109

Based on patent WO 9414466

US 5919757 A A61K-038/17 Cont of application WO 93EP3544  
 Cont of application US 95454184  
 KR 266146 B1 A61K-038/19  
 HU 219548 B A61K-038/18 Previous Publ. patent HU 74270  
 Based on patent WO 9414466  
 EP 674525 B1 G A61K-038/00 Based on patent WO 9414466  
 Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU NL  
 PT SE

Abstract (Basic): DE 4242919 A

Prod'n. of stable aq. granulocyte colony-stimulating factor (G-CSF) compsns. comprises adding an acetate, lactate, citrate, maleate and/or phosphate buffer to G-CSF in an amt. such that the final buffer concn. in the ready-to-administer compsn. is up to 50 mM.

Also claimed is a process for stabilising an aq. G-CSF compsn. in which an acetate, lactate, citrate, maleate or phosphate buffer is used as a stabiliser to avoid cloudiness. Also claimed is a stable aq. G-CSF compsn. contg. an acetate, lactate, citrate or maleate buffer.

The final buffer concn. is 2-40 (esp. 5-30) mM. Compsns. contg. 5-30 mM phosphate buffer or 5-40 mM acetate buffer are adjusted to pH 2.5-5 or 7-8. Compsns. contg. 5-30 mM citrate buffer or 5-40 mM phosphate/citrate buffer are adjusted to pH 2.5-3.5 or 7-7.5.

The compsn. may contain a surfactant in an amt. no greater than the amt. of G-CSF. The compsn. contains no polymers or protein additives.

USE/ADVANTAGE - The compsns. are useful as medicaments. The compsns. have good resistance to pptn. under mechanical stress, e.g. agitation.

Dwg.0/4

Derwent Class: B04; B05

International Patent Class (Main): A61K-037/02; A61K-038/00; A61K-038/17;  
 A61K-038/18; A61K-038/19

International Patent Class (Additional): A61K-009/08; A61K-009/14;  
 A61K-009/19; A61K-047/12; A61K-047/18

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## 2. ☐ 1/5/2 (Item 2 from file: 351)

009941780

WPI Acc No: 1994-209493/199426

**Freeze-dried granulocyte colony-stimulating factor compsns -  
 stabilised with maltose or amino sugar**

Patent Assignee: BOEHRINGER MANNHEIM GMBH (BOEF ); ROCHE DIAGNOSTICS GMBH  
 (HOFF )

Inventor: MICHAELIS U; RUDOLPH R; WINTER G; WOOG H; WINTER W; RAINER R; UWE  
 M

Number of Countries: 035 Number of Patents: 014

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4242863	A1	19940623	DE 4242863	A	19921218	199426 B
WO 9414465	A1	19940707	WO 93EP3543	A	19931215	199428
AU 9468086	A	19940719	AU 9468086	A	19931215	199439
EP 674524	A1	19951004	WO 93EP3543	A	19931215	199544
			EP 94902772	A	19931215	
JP 8504784	W	19960521	WO 93EP3543	A	19931215	199646
			JP 94514766	A	19931215	
HU 74269	T	19961128	WO 93EP3543	A	19931215	199712
			HU 951764	A	19931215	
AU 676573	B	19970313	AU 9468086	A	19931215	199719
NZ 258912	A	19970624	NZ 258912	A	19931215	199732
			WO 93EP3543	A	19931215	
EP 674524	B1	19980415	WO 93EP3543	A	19931215	199819
			EP 94902772	A	19931215	

DE 59308415	G	19980520	DE 508415	A	19931215	199826
			WO 93EP3543	A	19931215	
			EP 94902772	A	19931215	
ES 2117781	T3	19980816	EP 94902772	A	19931215	199839
US 5919443	A	19990706	WO 93EP3543	A	19931215	199933
			US 95454186	A	19950615	
SG 66740	A1	19990921	SG 961884	A	19931215	199945
KR 266145	B1	20000915	WO 93EP3543	A	19931215	200134
			KR 95702588	A	19950619	

Priority Applications (No Type Date): DE 4242863 A 19921218

Cited Patents: No-Citns.; DE 3723781; EP 373679; EP 528313; EP 528314; WO 9313752

#### Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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DE 4242863	A1	12	A61K-009/08		
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WO 9414465	A1 G	42	A61K-037/02		
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Designated States (National): AU BG BR CA CZ FI HU JP KR NO NZ PL RO RU SK UA US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

AU 9468086	A		A61K-037/02	Based on patent WO 9414465
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EP 674524	A1 G		A61K-037/02	Based on patent WO 9414465
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Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE

JP 8504784	W	38	A61K-038/00	Based on patent WO 9414465
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HU 74269	T		A61K-038/18	Based on patent WO 9414465
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AU 676573	B		A61K-038/19	Previous Publ. patent AU 9468086
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Based on patent WO 9414465

NZ 258912	A		A61K-009/14	Based on patent WO 9414465
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EP 674524	B1 G	24	A61K-038/00	Based on patent WO 9414465
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Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE

DE 59308415	G		A61K-038/00	Based on patent EP 674524
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Based on patent WO 9414465

ES 2117781	T3		A61K-038/00	Based on patent EP 674524
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US 5919443	A		A61K-045/05	Based on patent WO 9414465
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SG 66740	A1		A61K-038/19	
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KR 266145	B1		A61K-038/00	
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Abstract (Basic): DE 4242863 A

Freeze-dried granulocyte colony-stimulating factor (G-CSF) compsns. contg. maltose or an amino sugar are new.

Also claimed are aq. compsns. obtainable by redissolving a freeze-dried compsn. as above. Also claimed is the prodn. of a freeze-dried compsn. as above by preparing an aq. compsn. contg. G-CSF, maltose or an amino sugar, and opt. other additives, and freeze drying the aq. compsn.

The freeze-dried compsns. may also contains surfactants, amino acids (esp. arginine or phenylalanine) and additives selected from antioxidants, complexing agents, buffers, acids, bases, and isotonic agents, but no protein or polymer additives. The aq. compsns. have a pH of 6.5-8 or 3-5.

USE/ADVANTAGE - The compsns. are useful as medicaments. The freeze dried compsns. have good storage stability, esp. freeze-thaw stability. Dwg.0/0

Abstract (Equivalent): EP 674524 B

Freeze-dried granulocyte colony-stimulating factor (G-CSF) compsns. contg. maltose or an amino sugar are new.

Also claimed are aq. compsns. obtainable by redissolving a freeze-dried compsn. as above. Also claimed is the prodn. of a freeze-dried compsn. as above by preparing an aq. compsn. contg. G-CSF, maltose or an amino sugar, and opt. other additives, and freeze drying the aq. compsn.

The freeze-dried compsns. may also contains surfactants, amino acids (esp. arginine or phenylalanine) and additives selected from antioxidants, complexing agents, buffers, acids, bases, and isotonic

agents, but no protein or polymer additives. The aq. compsns. have a pH of 6.5-8 or 3-5.

USE/ADVANTAGE - The compsns. are useful as medicaments. The freeze dried compsns. have good storage stability, esp. freeze-thaw stability.

Dwg.0/0

Derwent Class: B03; B04

International Patent Class (Main): A61K-009/08; A61K-009/14; A61K-037/02;

A61K-038/00; A61K-038/18; A61K-038/19; A61K-045/05

International Patent Class (Additional): A61K-047/18; A61K-047/24;

A61K-047/26; A61K-047/36; C07K-014/535

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### 3. ☐ 1/5/3 (Item 3 from file: 351)

009366205

WPI Acc No: 1993-059684/199308

**Prepn. of compsn. contg. human protein and pharmaceuticals  
for infusion - contains preservatives which are opt. removed before  
storage, for germ free prod. giving minimal pain upon application**

Patent Assignee: BOEHRINGER MANNHEIM GMBH (BOEF ); ROCHE DIAGNOSTICS GMBH (HOFF )

Inventor: DEMMER F; GRUBER W; MARKL H; WINTER G; WOOG H; MARKL H J

Number of Countries: 038 Number of Patents: 028

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4126983	A1	19930218	DE 4126983	A	19910815	199308 B
EP 528313	A1	19930224	EP 92113571	A	19920810	199308
WO 9303744	A1	19930304	WO 92EP1822	A	19920810	199311
AU 9224094	A	19930316	AU 9224094	A	19920810	199328
NZ 243942	A	19940225	NZ 243942	A	19920813	199411
FI 9400674	A	19940214	WO 92EP1822	A	19920810	199416
			FI 94674	A	19940214	
NO 9400499	A	19940214	WO 92EP1822	A	19920810	199418
			NO 94499	A	19940214	
ZA 9206122	A	19940427	ZA 926122	A	19920814	199421
EP 607156	A1	19940727	EP 92916938	A	19920810	199429
			WO 92EP1822	A	19920810	
CZ 9400287	A3	19940817	CZ 94287	A	19920810	199436
SK 9400148	A3	19941109	WO 92EP1822	A	19920810	199503
			SK 94148	A	19940209	
JP 6510031	W	19941110	WO 92EP1822	A	19920810	199504
			JP 93504072	A	19920810	
HU 67379	T	19950428	WO 92EP1822	A	19920810	199523
			HU 94416	A	19920810	
US 5503827	A	19960402	WO 92EP1822	A	19920810	199619
			US 94193002	A	19940215	
EP 607156	B1	19961113	EP 92916938	A	19920810	199650
			WO 92EP1822	A	19920810	
DE 59207523	G	19961219	DE 507523	A	19920810	199705
			EP 92916938	A	19920810	
			WO 92EP1822	A	19920810	
ES 2094923	T3	19970201	EP 92916938	A	19920810	199712
AU 9716339	A	19970522	AU 9224094	A	19920810	199729
			AU 9716339	A	19970317	
AU 678756	B	19970612	AU 9224094	A	19920810	199732
BR 1100040	A3	19970819	BR 961100040	A	19960913	199739
RU 2091068	C1	19970927	WO 92EP1822	A	19920810	199823
			RU 9416163	A	19920810	
CZ 284853	B6	19990317	WO 92EP1822	A	19920810	199917

			CZ 94287	A	19920810	
SG 66226	A1	19990720	SG 961887	A	19920810	199936 N
AU 710768	B	19990930	AU 9224094	A	19920810	199952
			AU 9716339	A	19970317	
IL 102775	A	19991222	IL 102775	A	19920810	200008
MX 189351	B	19980715	MX 924636	A	19920811	200034
NO 309844	B1	20010409	WO 92EP1822	A	19920810	200129
			NO 94499	A	19940214	
KR 263282	B1	20000801	WO 92EP1822	A	19920810	200132
			KR 94700453	A	19940215	

Priority Applications (No Type Date): DE 4126983 A 19910815; SG 961887 A 19920810

Cited Patents: 1.Jnl.Ref; EP 306824; EP 58903; GB 2177914.

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4126983	A1		8	A61K-037/02	
EP 528313	A1 G		14	A61K-037/02	
Designated States (Regional): PT					
WO 9303744	A1 G		39	A61K-037/02	
Designated States (National): AU BG BR CA CS FI HU JP KR NO PL RO RU US					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL SE					
AU 9224094	A			A61K-037/02	Based on patent WO 9303744
NZ 243942	A			A61K-037/02	
FI 9400674	A			A61K-000/00	
NO 9400499	A			A61K-037/02	
ZA 9206122	A		38	A61K-000/00	
EP 607156	A1 G			A61K-037/02	Based on patent WO 9303744
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
CZ 9400287	A3			A61K-037/02	
SK 9400148	A3			A61K-037/02	
JP 6510031	W			A61K-037/02	Based on patent WO 9303744
HU 67379	T			A61K-038/00	Based on patent WO 9303744
US 5503827	A		9	A61K-035/14	Based on patent WO 9303744
EP 607156	B1 G		15	A61K-038/00	Based on patent WO 9303744
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT					
DE 59207523	G			A61K-038/00	Based on patent EP 607156
					Based on patent WO 9303744
ES 2094923	T3			A61K-038/00	Based on patent EP 607156
AU 9716339	A			A61K-038/02	Div ex application AU 9224094
AU 678756	B			A61K-037/02	Previous Publ. patent AU 9224094
					Based on patent WO 9303744
BR 1100040	A3			A61K-038/49	
RU 2091068	C1		13	A61K-031/21	
CZ 284853	B6			A61K-038/17	Previous Publ. patent CZ 9400287
					Based on patent WO 9303744
SG 66226	A1			A61K-038/00	
AU 710768	B			A61K-038/02	Div ex application AU 9224094
					Div ex patent AU 678756
					Previous Publ. patent AU 9716339
IL 102775	A			A61K-038/16	
MX 189351	B			A61K-037/002	
NO 309844	B1			A61K-047/06	Previous Publ. patent NO 9400499
KR 263282	B1			A61K-038/00	

Abstract (Basic): DE 4126983 A

Prepn. of a pharmaceutical (I), contg. human protein for use as an injection or infusion soln. comprises adding at least one preservative in a concn. of up to 2% during the prepn. of (I) and opt. removing this before the prepn. of a storage stable (I) formulation.

Preservative has a low allergy rate and need not be removed and also has low reactivity towards the human prepn. The preservative is esp. chlorobutanol, benzylalcohol and/or benzalkonium chloride, if it is to remain in (I), or benzylalcohol, p-chloro-m-cresol or esp.



pref. chloreton or pyrocarbonic acid dialkyl ester if it is to be removed, in which case the contact time between preservative and human protein is brief. The human protein is a polypeptide with erythropoietin-like action. The preservative is used in a concn. of 0.1-0.3l and the pH is 4.5-7.4. The buffer capacity of the (I) formulaton is up to 2mVal/l and the titration acidity is upto 5mVal/l. The buffer substance is tolerated by the body, eg., glyocol, sodium citrate, prim. potassium phosphate, sec. sodium phosphate, carbonate, salts of aminoacids, sodium and potassium salts of malic acid etc.

USE/ADVANTAGE - (I) is tolerated by the human body and is reproducible, germ-free and gives the least possible pain on application. If the preservative chosen has a low allergy rate, it is possible to leave it in (I), and thus avoid the need for selective removal

Dwg.0/0

Abstract (Equivalent): EP 607156 B

Process for the production of liquid, preserved human protein-containing pharmaceutical preparations suitable for use as injection or infusion solutions in the form of multidose preparations, wherein during the production of the pharmaceutical at least one preservative is added and is selected from the group chlorobutanol, benzylalcohol, benzalkonium chloride or combinations of these substances and the concentration of the preservative is of up to 2% (w/v %) in the solution.

(Dwg.0/0)

Abstract (Equivalent): US 5503827 A

Process for the prodn. of preserved isolated or recombinantly produced human protein-contg. pharmaceutical preps. suitable for use as injection or infusion solns. in the form of multi-dose preps., comprising forming a soln. of the isolated or recombinantly produced human protein and at least one preservative selected from the gp. consisting of chlorobutanol, benzyl alcohol, benzalkonium chloride and mixts. thereof, in the absence of a mineral suspension, wherein the concn. of the preservative in the multi-dose prepn. is 0.001 to 2 w/v %.

Dwg.0/0

Derwent Class: B04

International Patent Class (Main): A61K-000/00; A61K-031/21; A61K-035/14; A61K-037/002; A61K-037/02; A61K-038/00; A61K-038/02; A61K-038/16; A61K-038/17; A61K-038/49; A61K-047/06

International Patent Class (Additional): A61K-009/08; A61K-009/19; A61K-009/38; A61K-031/02; A61K-031/05; A61K-031/065; A61K-035/014; A61K-037/24; A61K-038/18; A61K-038/19; A61K-038/21; A61K-047/010; A61K-047/014; A61K-047/018; A61K-047/10; A61K-047/12; A61K-047/14; A61K-047/18; A61K-047/32; C07K-014/505; C07K-014/535

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4. ☐

1/5/4 (Item 1 from file: 345)

14596627

Basic Patent (No,Kind,Date): DE 4242863 A1 19940623

PATENT FAMILY:

AUSTRIA (AT)

Patent (No,Kind,Date): AT 165007 E 19980515

STABILE LYOPHILISIERTE PHARMAZEUTISCHE ZUBEREITUNGEN VON G-CSF (German)

Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)

Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER GERHARD (DE); WOOG HEINRICH (DE)

Priority (No,Kind,Date): DE 4242863 A 19921218  
Applic (No,Kind,Date): EP 94902772 A 19931215  
Addnl Info: 00674524 19980415  
IPC: \* A61K-038/00; A61K-009/14; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: German

## AUSTRALIA (AU)

Patent (No,Kind,Date): AU 9468086 A1 19940719  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS G-CSF (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): MICHAELIS UWE; RUDOLPH RAINER; WINTER GERHARD; WOOG HEINRICH  
Priority (No,Kind,Date): DE 4242863 A 19921218; WO 93EP3543 W 19931215  
Applic (No,Kind,Date): AU 9468086 A 19931215  
IPC: \* A61K-037/02; A61K-009/14; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: English  
Patent (No,Kind,Date): AU 676573 B2 19970313  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS G-CSF (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): MICHAELIS UWE; RUDOLPH RAINER; WINTER GERHARD; WOOG HEINRICH  
Priority (No,Kind,Date): DE 4242863 A 19921218; WO 93EP3543 W 19931215  
Applic (No,Kind,Date): AU 9468086 A 19931215  
IPC: \* A61K-009/14; A61K-047/18; A61K-047/26; A61K-038/19  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: English

## GERMANY (DE)

Patent (No,Kind,Date): DE 4242863 A1 19940623  
STABILE LYOPHILISIERTE PHARMAZEUTISCHE ZUBEREITUNGEN VON G-CSF (German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE DIPL BIOL DR (DE); RUDOLPH RAINER PROF DIPL CHEM (DE); WINTER WERNER DR (DE); WOOG HEINRICH DR (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218  
Applic (No,Kind,Date): DE 4242863 A 19921218  
IPC: \* A61K-009/08  
CA Abstract No: \* 121(10)117713T; 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493; C 94-209493  
Language of Document: German  
Patent (No,Kind,Date): DE 59308415 C0 19980520  
STABILE LYOPHILISIERTE PHARMAZEUTISCHE ZUBEREITUNGEN VON G-CSF (German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 59308415 A 19931215; DE 4242863 A 19921218; WO 93EP3543 W 19931215  
Applic (No,Kind,Date): DE 59308415 A 19931215  
IPC: \* A61K-038/00; A61K-009/14; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: German

## DENMARK (DK)

Patent (No,Kind,Date): DK 674524 T3 19990201  
STABILE, LYOFILISEREDE, FARMACEUTISKE SAMMENSAETNINGER AF G-CSF (Danish)  
Patent Assignee: ROCHE DIAGNOSTICS GMBH (DE); BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER

GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218; WO 93EP3543 W  
19931215  
Applic (No,Kind,Date): DK 9494902772 A 19931215  
IPC: \* A61K-037/02; A61K-038/00; A61K-009/14; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: Danish

## EUROPEAN PATENT OFFICE (EP)

Patent (No,Kind,Date): EP 674524 A1 19951004  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS G-CSF. (English; French;  
German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218; WO 93EP3543 W  
19931215  
Applic (No,Kind,Date): EP 94902772 A 19931215  
Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; GR; IE;  
IT; LI; LU; NL; PT; SE  
IPC: \* A61K-038/00; A61K-009/14; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: German  
Patent (No,Kind,Date): EP 674524 B1 19980415  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS G-CSF (English; French;  
German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218; WO 93EP3543 W  
19931215  
Applic (No,Kind,Date): EP 94902772 A 19931215  
Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; GR; IE;  
IT; LI; LU; NL; PT; SE  
IPC: \* A61K-038/00; A61K-009/14; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: German

## SPAIN (ES)

Patent (No,Kind,Date): ES 2117781 T3 19980816  
PREPARACIONES FARMACEUTICAS LIOFILIZADAS Y ESTABLES DE G-CSF. (Spanish)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218  
Applic (No,Kind,Date): ES 94902772 EP 19931215  
Addnl Info: 0674524 EP patent valid in AT  
IPC: \* A61K-038/00; A61K-009/14; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: Spanish

## HUNGARY (HU)

Patent (No,Kind,Date): HU 9501764 A0 19950828  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS G-CSF (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): RUDOLPH RAINER (DE); WOOG HEINRICH (DE); WINTER  
GERHARD (DE); MICHAELIS UWE (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218  
Applic (No,Kind,Date): HU 959501764 A 19931215  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: Hungarian

Patent (No,Kind,Date): HU T74269 A2 19961128  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS OF G-CSF (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218  
Applic (No,Kind,Date): HU 959501764 A 19931215  
IPC: \* A61K-038/18; A61K-047/36  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: Hungarian

## JAPAN (JP)

Patent (No,Kind,Date): JP 8504784 T2 19960521  
Priority (No,Kind,Date): DE 4242863 A 19921218; WO 93EP3543 W  
19931215  
Applic (No,Kind,Date): JP 93514766 A 19931215  
IPC: \* A61K-038/00; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: Japanese

## KOREA, REPUBLIC (KR)

Patent (No,Kind,Date): KR 266145 B1 20000915  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS G-CSF (English)  
Patent Assignee: ROCHE DIAGNOSTICS GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLF RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218; WO 93EP3543 W  
19931215  
Applic (No,Kind,Date): KR 95702588 T 19950619  
IPC: \* A61K-038/00; A61K-009/14  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: Korean

## NEW ZEALAND (NZ)

Patent (No,Kind,Date): NZ 258912 A 19970624  
LYOPHILISED PREPARATION OF G-CSF AND A SUGAR (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): WINTER GERHARD; WOOG HEINRICH; RUDOLPH RAINER;  
MICHAELIS UWE  
Priority (No,Kind,Date): DE 4242863 A 19921218  
Applic (No,Kind,Date): NZ 258912 A 19931215  
IPC: \* A61K-009/14; A61K-038/19; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: English

## SINGAPORE (SG)

Patent (No,Kind,Date): SG 6600740 A1 19990921  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS OF G-CSF (English)  
Patent Assignee: ROCHE DIAGNOSTICS GMBH  
Author (Inventor): MICHAELIS UWE; RUDOLPH RAINER; WINTER GERHARD; WOOG  
HEINRICH  
Priority (No,Kind,Date): DE 4242863 A 19921218  
Applic (No,Kind,Date): SG 9601884 A 19931215  
IPC: \* A61K-038/19; A61K-047/24; C07K-014/535  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: English

## UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 5919443 A 19990706  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS OF G-CSF (English)

Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218; WO 93EP3543 W  
19931215  
Applic (No,Kind,Date): US 454186 A 19950615  
National Class: \* 424085100; 530351000  
IPC: \* A61K-045/05  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: English

## WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Patent (No,Kind,Date): WO 9414465 A1 19940707  
STABLE LYOPHILIZED PHARMACEUTICAL PREPARATIONS G-CSF (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE); MICHAELIS UWE (DE);  
RUDOLPH RAINER (DE); WINTER GERHARD (DE); WOOG HEINRICH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242863 A 19921218  
Applic (No,Kind,Date): WO 93EP3543 A 19931215  
Designated States: (National) AU; BG; BR; CA; CZ; FI; HU; JP; KR; NO;  
NZ; PL; RO; RU; SK; UA; US (Regional) AT; BE; CH; DE; DK; ES; FR;  
GB; GR; IE; IT; LU; MC; NL; PT; SE  
Filing Details: WO 100000 With international search report  
IPC: \* A61K-037/02; A61K-009/14; A61K-047/18; A61K-047/26  
CA Abstract No: \* 121(10)117713T  
Derwent WPI Acc No: \* C 94-209493  
Language of Document: German

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5. ☐

1/5/5 (Item 2 from file: 345)

13467424

Basic Patent (No,Kind,Date): IL 102775 A0 19930131

## PATENT FAMILY:

## AUSTRIA (AT)

Patent (No,Kind,Date): AT 145138 E 19961115  
VERFAHREN ZUR HERSTELLUNG VON HUMANPROTEINHALTIGEN, KONSERVIERTEN  
ARZNEIMITTELN FUER INFUSIONS- ODER INJEKTIONSZWECKE (German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): EP 92916938 A 19920810  
Addnl Info: 00607156 19961113  
IPC: \* A61K-038/00; A61K-047/10; A61K-047/18; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: German

## AUSTRALIA (AU)

Patent (No,Kind,Date): AU 9224094 A1 19930316  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): WOOG HEINRICH; GRUBER WERNER; MARKL HANS-JORG;  
WINTER GERHARD; DEMMER FRITZ

Priority (No,Kind,Date): WO 92EP1822 A 19920810; DE 4126983 A 19910815  
Applic (No,Kind,Date): AU 9224094 A 19920810  
IPC: \* A61K-047/10; A61K-047/18; A61K-037/02; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: English  
Patent (No,Kind,Date): AU 9716339 A1 19970522  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): WOOG HEINRICH; GRUBER WERNER; MARKL HANS JORG;  
WINTER GERHARD; DEMMER FRITZ  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): AU 9716339 A 19970317  
IPC: \* A61K-038/02; A61K-038/17; A61K-038/18; A61K-038/21; A61K-047/10  
; A61K-047/18; A61K-047/12; A61K-009/08  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: English  
Patent (No,Kind,Date): AU 678756 B2 19970612  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): WOOG HEINRICH; GRUBER WERNER; MARKL HANS-JORG;  
WINTER GERHARD; DEMMER FRITZ  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W 19920810  
Applic (No,Kind,Date): AU 9224094 A 19920810  
IPC: \* A61K-047/10; A61K-047/18; A61K-037/02; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: English  
Patent (No,Kind,Date): AU 710768 B2 19990930  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: ROCHE DIAGNOSTICS GMBH  
Author (Inventor): WOOG HEINRICH; GRUBER WERNER; MARKL HANS JORG;  
WINTER GERHARD; DEMMER FRITZ  
Priority (No,Kind,Date): AU 9224094 A3 19920810; DE 4126983 A 19910815  
Applic (No,Kind,Date): AU 9716339 A 19970317  
IPC: \* A61K-038/02; A61K-038/17; A61K-038/18; A61K-038/21; A61K-047/10  
; A61K-047/18; A61K-047/12; A61K-009/08  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: English

## CZECH REPUBLIC (CZ)

Patent (No,Kind,Date): CZ 9400287 A3 19940817  
PROCESS FOR PREPARING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEIN  
FOR INFUSION OR INJECTION PURPOSES (Czech; English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JORG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W 19920810  
Applic (No,Kind,Date): CZ 9228794 A 19920810  
IPC: \* A61K-037/02; A61K-047/10; A61K-047/18; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Czech; Slovak  
Patent (No,Kind,Date): CZ 284853 B6 19990317  
PHARMACEUTICAL PREPARATION INTENDED FOR USE AS INJECTION OR INFUSION  
SOLUTION AND PROCESS FOR PREPARING THEREOF (Czech; English)

Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JORG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): CZ 94287 A 19920810  
IPC: \* A61K-038/17; A61K-047/10; A61K-047/18; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Czech; Slovak

## GERMANY (DE)

Patent (No,Kind,Date): DE 4126983 A1 19930218  
VERFAHREN ZUR HERSTELLUNG VON HUMANPROTEIN-ENTHALTENDEN, KONSERVIERTEN  
ARZNEIMITTELN FUER INFUSIONS- ODER INJEKTIONSZWECKE (German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH DR (DE); DEMMER FRITZ DR (DE);  
WINTER GERHARD DR (DE); MARKL HANS-JOERG (DE); GRUBER WERNER (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): DE 4126983 A 19910815  
IPC: \* A61K-037/02  
CA Abstract No: ; 118(14)132215P  
Derwent WPI Acc No: ; C 93-059684  
Language of Document: German

Patent (No,Kind,Date): DE 59207523 C0 19961219  
VERFAHREN ZUR HERSTELLUNG VON HUMANPROTEINHALTIGEN, KONSERVIERTEN  
ARZNEIMITTELN FUER INFUSIONS- ODER INJEKTIONSZWECKE (German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 59207523 A 19920810; DE 4126983 A  
19910815; WO 92EP1822 W 19920810  
Applic (No,Kind,Date): DE 59207523 A 19920810  
IPC: \* A61K-038/00; A61K-047/10; A61K-047/18; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: German

## DENMARK (DK)

Patent (No,Kind,Date): DK 607156 T3 19970407  
FREMANGSMAADE TIL FREMSTILLING AF KONSERVEREDE LAEGEMIDLER  
INDEHOLDENDE HUMANE PROTEINER TIL INFUSIONS- ELLER INJEKTIONSFORMAAL  
(Danish)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-J (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): DK 9292916938 A 19920810  
IPC: \* A61K-038/00; A61K-047/10; A61K-047/14; A61K-047/18  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Danish

## EUROPEAN PATENT OFFICE (EP)

Patent (No,Kind,Date): EP 528313 A1 19930224  
PROCESS FOR THE PREPARATION OF A PRESERVED MEDICINE CONTAINING AN HUMAN  
PROTEIN FOR INJECTION OF INFUSION (English; French; German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH DR (DE); GRUBER WERNER (DE); MARKL  
HANS JOERG (DE); WINTER GERHARD DR (DE); DEMMER FRITZ DR (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): EP 92113571 A 19920810  
Designated States: (National) PT  
IPC: \* A61K-037/02; A61K-047/10; A61K-047/18; A61K-047/14  
Language of Document: German  
Patent (No,Kind,Date): EP 607156 A1 19940727

PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
 FOR THE PURPOSES OF INFUSION OR INJECTION. (English; French; German)  
 Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
 Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
 HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
 Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
 19920810  
 Applic (No,Kind,Date): EP 92916938 A 19920810  
 Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; GR; IE;  
 IT; LI; LU; MC; NL; PT  
 IPC: \* A61K-037/02; A61K-047/10; A61K-047/18; A61K-047/14  
 CA Abstract No: \* 118(14)132215P  
 Derwent WPI Acc No: \* C 93-059684  
 Language of Document: German  
 Patent (No,Kind,Date): EP 607156 B1 19961113  
 PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
 FOR THE PURPOSES OF INFUSION OR INJECTION (English; French; German)  
 Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
 Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
 HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
 Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
 19920810  
 Applic (No,Kind,Date): EP 92916938 A 19920810  
 Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; GR; IE;  
 IT; LI; LU; NL; PT; SE  
 IPC: \* A61K-038/00; A61K-047/10; A61K-047/18; A61K-047/14  
 CA Abstract No: \* 118(14)132215P  
 Derwent WPI Acc No: \* C 93-059684  
 Language of Document: German

## SPAIN (ES)

Patent (No,Kind,Date): ES 2094923 T3 19970201  
 PROCEDIMIENTO DE PREPARACION DE MEDICAMENTOS CONSERVADOS QUE CONTIENEN  
 PROTEINAS HUMANAS, PARA FINES DE INFUSION O INYECCION. (Spanish)  
 Patent Assignee: BOEHRINGER MANNHEIM GMBH  
 Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
 HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
 Priority (No,Kind,Date): DE 4126983 A 19910815  
 Applic (No,Kind,Date): ES 92916938 EP 19920810  
 Addnl Info: 0607156 EP patent valid in AT  
 IPC: \* A61K-038/00; A61K-047/10; A61K-047/18; A61K-047/14  
 CA Abstract No: \* 118(14)132215P  
 Derwent WPI Acc No: \* C 93-059684  
 Language of Document: Spanish

## FINLAND (FI)

Patent (No,Kind,Date): FI 9400674 A 19940214  
 FOERFARANDE FOER FRAMSTAELLNING AV MAENNISKOPROTEINHALTIGA KONSERVERADE  
 LAEKEMEDEL FOER INFUSIONS- ELLER INJEKTIONSAENDAMAAL (Swedish)  
 Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
 Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
 HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
 Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
 19920810  
 Applic (No,Kind,Date): FI 94674 A 19940214  
 IPC: \* A61K  
 CA Abstract No: \* 118(14)132215P  
 Derwent WPI Acc No: \* C 93-059684  
 Language of Document: Finnish; Swedish  
 Patent (No,Kind,Date): FI 9400674 A0 19940214  
 FOERFARANDE FOER FRAMSTAELLNING AV MAENNISKOPROTEINHALTIGA KONSERVERADE  
 LAEKEMEDEL FOER INFUSIONS- ELLER INJEKTIONSAENDAMAAL (Swedish)  
 Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
 Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
 HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)



Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 A  
19920810  
Applic (No,Kind,Date): FI 94674 A 19940214  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Finnish; Swedish

## GREECE (GR)

Patent (No,Kind,Date): GR 3022037 T3 19970331  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION. (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): GR 403464 A 19961213  
IPC: \* A61K-038/00; A61K-047/10; A61K-047/18; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Greek

## HUNGARY (HU)

Patent (No,Kind,Date): HU 9400416 A0 19940530  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): GRUBER WERNER (DE); MARKL HANS-JOERG (DE); WOOG  
HEINRICH (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): HU 949400416 A 19920810  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Hungarian  
Patent (No,Kind,Date): HU T67379 A2 19950428  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): GRUBER WERNER (DE); MARKL HANS-JOERG (DE); WOOG  
HEINRICH (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): HU 949400416 A 19920810  
IPC: \* A61K-038/00; A61K-047/10; A61K-047/18; A61K-047/14; A61K-009/08  
; A61K-009/19  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Hungarian

## JAPAN (JP)

Patent (No,Kind,Date): JP 6510031 T2 19941110  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): JP 92504072 A 19920810  
IPC: \* A61K-037/02; A61K-037/24; A61K-047/10; A61K-047/14; A61K-047/18  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Japanese

## KOREA, REPUBLIC (KR)

Patent (No,Kind,Date): KR 263282 B1 20000801  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: ROCHE DIAGNOSTICS GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JORG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)

Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): KR 94700453 T 19940215  
IPC: \* A61K-038/00; A61K-047/10; A61K-047/18  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Korean

## MEXICO (MX)

Patent (No,Kind,Date): MX 9204636 A1 19930506  
PROCESO PARA LA PRODUCCION DE MEDICAMENTOS PRESERVADOS QUE CONTIENEN  
PROTEINA HUMANA PARA PROPOSITOS DE INFUSION O INYECCION (Spanish)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): MX 9204636 A 19920811  
IPC: \* A61K-037/02  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Spanish

## NORWAY (NO)

Patent (No,Kind,Date): NO 9400499 A 19940214  
FREMANGSMAATE FOR FREMSTILLING AV HUMANPROTEINHOLDIGE, KONSERVE  
LEGE MIDLER FOR INFUSJONS- ELLER INJEKSJONSFORMAAL (Norwegian)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JORG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): NO 94499 A 19940214  
IPC: \* A61K-037/02; A61K-047/10; A61K-047/14; A61K-047/18  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Norwegian

Patent (No,Kind,Date): NO 9400499 A0 19940214  
FREMANGSMAATE FOR FREMSTILLING AV HUMANPROTEINHOLDIGE, KONSERVE  
LEGE MIDLER FOR INFUSJONS- ELLER INJEKSJONSFORMAAL (Norwegian)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JORG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): NO 94499 A 19940214  
IPC: \* A61K-037/02; A61K-047/10; A61K-047/14; A61K-047/18  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Norwegian

Patent (No,Kind,Date): NO 309844 B1 20010409  
KONSERVE, HUMANPROTEINHOLDIGE LEGEMIDLER FOR ANVENDELSE SOM  
INJEKSJONS- ELLER INFUSJONSOPPLESNING I FORM AV FLERDOSEPREPARATER  
(Norwegian)  
Patent Assignee: ROCHE DIAGNOSTICS GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): NO 94499 A 19940214  
IPC: \* A61K-047/06  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Norwegian

## NEW ZEALAND (NZ)

Patent (No,Kind,Date): NZ 243942 A 19940225  
MULTIDOSE PREPARATIONS OF HUMAN EPO OR G-CSF AND A PRESERVING AGENT  
(English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): WOOG HENRICH; GRUBER WERNER; MARKL HANS JOERG;  
WINTER GERHARD; DEMMER FRITZ  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): NZ 243942 A 19920813  
IPC: \* A61K-037/02; A61K-047/10; A61K-047/18  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: English

## SLOVAKIA (SK)

Patent (No,Kind,Date): SK 9400148 A3 19941109  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JORG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): SK 94148 A 19920810  
IPC: \* A61K-037/02; A61K-047/10; A61K-047/18; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Slovak

## RUSSIA (RU)

Patent (No,Kind,Date): RU 2091068 C1 19970927  
METHOD OF PREPARING THE PRESERVED MEDICINAL AGENT CONTAINING HUMAN  
PROTEIN FOR INJECTION OR INFUSION ADMINISTRATION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): KHAJNRIKH VOOG (DE); VERNER GRUBER (DE);  
KHAJNS-JORG MARKL (DE); GERKHARD VINTER (DE); FRITTS DEMMER (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): RU 9416163 A 19920810  
IPC: \* A61K-031/21; A61K-031/065; A61K-031/05; A61K-031/02;  
A61K-009/38  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: Russian

## SINGAPORE (SG)

Patent (No,Kind,Date): SG 6600226 A1 19990720  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): WOOG HEINRICH; GRUBER WERNER; MARKL HANS-JORG;  
WINTER GERHARD; DEMMER FRITZ  
Priority (No,Kind,Date): SG 9601887 A 19920810; DE 4126983 A  
19910815  
Applic (No,Kind,Date): SG 9601887 A 19920810  
IPC: \* A61K-038/00; A61K-047/10; A61K-047/18; A61K-047/14  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: English

## UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 5503827 A 19960402  
PROCESS FOR THE PRODUCTION OF MULTI-DOSE PHARMACEUTICAL PREPARATIONS  
CONTAINING ISOLATED OR RECOMBINANTLY PRODUCED HUMAN PROTEIN FOR  
INFUSION OR INJECTION PURPOSES (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)

Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815; WO 92EP1822 W  
19920810  
Applic (No,Kind,Date): US 193002 A 19940215  
National Class: \* 424085100; 514008000; 514012000; 514021000;  
530351000; 530380000; 530395000; 530397000; 530399000; 530829000  
IPC: \* A61K-035/14; A61K-038/16; C07K-014/505; C07K-014/535  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: English

## WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Patent (No,Kind,Date): WO 9303744 A1 19930304  
PROCESS FOR PRODUCING PRESERVED MEDICAMENTS CONTAINING HUMAN PROTEINS  
FOR THE PURPOSES OF INFUSION OR INJECTION (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WOOG HEINRICH (DE); GRUBER WERNER (DE); MARKL  
HANS-JOERG (DE); WINTER GERHARD (DE); DEMMER FRITZ (DE)  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): WO 92EP1822 A 19920810  
Designated States: (National) AU; BG; BR; CA; CS; FI; HU; JP; KR; NO;  
PL; RO; RU; US (Regional) AT; BE; CH; DE; DK; ES; FR; GB; GR; IE;  
IT; LU; MC; NL; SE  
Filing Details: WO 100000 With international search report  
IPC: \* A61K-037/02; A61K-047/10; A61K-047/18; A61K-047/14  
Language of Document: German

## SOUTH AFRICA (ZA)

Patent (No,Kind,Date): ZA 9206122 A 19940214  
PROCESS FOR THE PRODUCTION OF HUMAN PROTEIN CONTAINING PRESERVED  
MEDICAMENTS FOR INFUSION OR INJECTION PURPOSES (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): WOOG HEINRICH; GRUBER WERNER; MARKL HANS JOERG;  
WINTER GERHARD; DEMMER FRITZ  
Priority (No,Kind,Date): DE 4126983 A 19910815  
Applic (No,Kind,Date): ZA 929206122 A 19920814  
IPC: \* A61K  
CA Abstract No: \* 118(14)132215P  
Derwent WPI Acc No: \* C 93-059684  
Language of Document: English

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6. ☐

1/5/6 , (Item 3 from file: 345)

11790294

Basic Patent (No,Kind,Date): DE 4242919 A1 19940623

## PATENT FAMILY:

## AUSTRALIA (AU)

Patent (No,Kind,Date): AU 9458109 A1 19940719  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE  
(English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): MICHAELIS UWE; RUDOLPH RAINER; WINTER GERHARD; WOOG  
HEINRICH  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W  
19931215

Applic (No,Kind,Date): AU 9458109 A , 19931215  
IPC: \* A61K-037/02; A61K-009/14; A61K-047/18  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: English  
Patent (No,Kind,Date): AU 692430 B2 19980611  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE  
(English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): MICHAELIS UWE; RUDOLPH RAINER; WINTER GERHARD; WOOG  
HEINRICH  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W  
19931215  
Applic (No,Kind,Date): AU 9458109 A 19931215  
IPC: \* A61K-047/12; A61K-037/02; A61K-047/18  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: English

## CANADA (CA)

Patent (No,Kind,Date): CA 2151957 AA 19940707  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WHICH ARE STABLE IN  
STORAGE (English; French)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): WINTER GERHARD (DE); WOOG HEINRICH (DE); RUDOLPH  
RAINER (DE); MICHAELIS UWE (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218  
Applic (No,Kind,Date): CA 2151957 A 19931215  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: English

## GERMANY (DE)

Patent (No,Kind,Date): DE 4242919 A1 19940623  
VERFAHREN ZUR HERSTELLUNG VON LAGERSTABILEN WAESSRIGEN PHARMAZEUTISCHEN  
ZUBEREITUNGEN VON G-CSF (German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE DIPL BIOL DR (DE); RUDOLPH RAINER  
PROF DIPL CHEM (DE); WINTER GERHARD DR (DE); WOOG HEINRICH DR (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218  
Applic (No,Kind,Date): DE 4242919 A 19921218  
IPC: \* A61K-037/02  
CA Abstract No: \* 121(10)117708V; 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513; C 94-209513  
Language of Document: German

## EUROPEAN PATENT OFFICE (EP)

Patent (No,Kind,Date): EP 674525 A1 19951004  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE.  
(English; French; German)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W  
19931215  
Applic (No,Kind,Date): EP 94903779 A 19931215  
Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; GR; IE;  
IT; LI; LU; NL; PT; SE  
IPC: \* A61K-038/00; A61K-009/14; A61K-047/18  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: German  
Patent (No,Kind,Date): EP 674525 B1 20010725  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE  
(English; French; German)  
Patent Assignee: ROCHE DIAGNOSTICS GMBH (DE)

Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W 19931215  
Applic (No,Kind,Date): EP 94903779 A 19931215  
Designated States: (National) AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; NL; PT; SE  
IPC: \* A61K-038/00; A61K-009/14; A61K-009/19; A61K-047/18  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: German

## HUNGARY (HU)

Patent (No,Kind,Date): HU 9501767 A0 19950828  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): RUDOLPH RAINER (DE); WOOG HEINRICH (DE); WINTER GERHARD (DE); MICHAELIS UWE (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W 19931215  
Applic (No,Kind,Date): HU 959501767 A 19931215  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: Hungarian  
Patent (No,Kind,Date): HU T74270 A2 19961128  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE AND PROCESS TO PREPARE THEM (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W 19931215  
Applic (No,Kind,Date): HU 959501767 A 19931215  
IPC: \* A61K-038/18; A61K-047/12  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: Hungarian  
Patent (No,Kind,Date): HU 219548 B 20010528  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE AND PROCESS TO PREPARE THEM (English)  
Patent Assignee: ROCHE DIAGNOSTICS GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W 19931215  
Applic (No,Kind,Date): HU 959501767 A 19931215  
IPC: \* A61K-038/18  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: Hungarian

## JAPAN (JP)

Patent (No,Kind,Date): JP 8505610 T2 19960618  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W 19931215  
Applic (No,Kind,Date): JP 93514767 A 19931215  
IPC: \* A61K-038/00; A61K-009/08; A61K-009/14; A61K-047/18  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: Japanese

## KOREA, REPUBLIC (KR)

Patent (No,Kind,Date): KR 266146 B1 20000915  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE (English)

Patent Assignee: ROCHE DIAGNOSTICS GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218; WO 93EP3544 W  
19931215  
Applic (No,Kind,Date): KR 95702589 T 19950619  
IPC: \* A61K-038/19; A61K-009/14; A61K-047/12  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: Korean

## NEW ZEALAND (NZ)

Patent (No,Kind,Date): NZ 259333 A 19961028  
PHARMACEUTICAL PREPARATIONS; STABLE AQUEOUS PREPARATIONS OF G-GSF  
CONTAINING AT LEAST ONE SELECTED BUFFER (English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH  
Author (Inventor): WINTER GERHARD; WOOG HEINRICH; RUDOLPH RAINER;  
MICHAELIS UWE  
Priority (No,Kind,Date): DE 4242919 A 19921218  
Applic (No,Kind,Date): NZ 259333 A 19931215  
IPC: \* A61K-038/19; A61K-038/18; A61K-009/14  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: English

## UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 5919757 A 19990706  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE  
(English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218  
Applic (No,Kind,Date): US 857172 A 19970515  
National Class: \* 514008000; 514012000; 514021000  
IPC: \* A61K-038/17  
CA Abstract No: \* 121(10)117708V  
Derwent WPI Acc No: \* C 94-209513  
Language of Document: English

## WORLD INTELLECTUAL PROPERTY ORGANIZATION, PCT (WO)

Patent (No,Kind,Date): WO 9414466 A1 19940707  
AQUEOUS PHARMACEUTICAL PREPARATIONS OF G-CSF WITH A LONG SHELF LIFE  
(English)  
Patent Assignee: BOEHRINGER MANNHEIM GMBH (DE); MICHAELIS UWE (DE);  
RUDOLPH RAINER (DE); WINTER GERHARD (DE); WOOG HEINRICH (DE)  
Author (Inventor): MICHAELIS UWE (DE); RUDOLPH RAINER (DE); WINTER  
GERHARD (DE); WOOG HEINRICH (DE)  
Priority (No,Kind,Date): DE 4242919 A 19921218  
Applic (No,Kind,Date): WO 93EP3544 A 19931215  
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Language of Document: German

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